



81408-4400 sequence listing.txt
SEQUENCE LISTING

<110> Yayon, Avner
Rom, Eran
Thomassen-wolf, Elisabeth
Borges, Eric

<120> ANTIBODIES THAT BLOCK RECEPTOR PROTEIN TYROSINE KINASE ACTIVATION,
METHODS OF SCREENING AND USES THEREOF

<130> 81408-4400

<140> US 10/734,661
<141> 2003-12-15

<150> US 60/299,187
<151> 2001-06-20

<150> PCT/IL02/00494
<151> 2002-06-20

<160> 106

<170> PatentIn version 3.2

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<313> (1)..(806)

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Gly Arg Ala Ala Glu Val Pro Gly Pro Glu Pro Gly Gln Gln Glu Gln
35 40 45

Leu Val Phe Gly Ser Gly Asp Ala Val Glu Leu Ser Cys Pro Pro Pro
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Gly Gly Gly Pro Met Gly Pro Thr Val Trp Val Lys Asp Gly Thr Gly
65 70 75 80

Leu Val Pro Ser Glu Arg Val Leu Val Gly Pro Gln Arg Leu Gln Val
85 90 95

Leu Asn Ala Ser His Glu Asp Ser Gly Ala Tyr Ser Cys Arg Gln Arg
100 105 110

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Leu Thr Gln Arg Val Leu Cys His Phe Ser Val Arg Val Thr Asp Ala
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 Pro Ser Ser Gly Asp Asp Glu Asp Gly Glu Asp Glu Ala Glu Asp Thr
 130 135 140
 Gly Val Asp Thr Gly Ala Pro Tyr Trp Thr Arg Pro Glu Arg Met Asp
 145 150 155 160
 Lys Lys Leu Leu Ala Val Pro Ala Ala Asn Thr Val Arg Phe Arg Cys
 165 170 175
 Pro Ala Ala Gly Asn Pro Thr Pro Ser Ile Ser Trp Leu Lys Asn Gly
 180 185 190
 Arg Glu Phe Arg Gly Glu His Arg Ile Gly Gly Ile Lys Leu Arg His
 195 200 205
 Gln Gln Trp Ser Leu Val Met Glu Ser Val Val Pro Ser Asp Arg Gly
 210 215 220
 Asn Tyr Thr Cys Val Val Glu Asn Lys Phe Gly Ser Ile Arg Gln Thr
 225 230 235 240
 Tyr Thr Leu Asp Val Leu Glu Arg Ser Pro His Arg Pro Ile Leu Gln
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 Ala Gly Leu Pro Ala Asn Gln Thr Ala Val Leu Gly Ser Asp Val Glu
 260 265 270
 Phe His Cys Lys Val Tyr Ser Asp Ala Gln Pro His Ile Gln Trp Leu
 275 280 285
 Lys His Val Glu Val Asn Gly Ser Lys Val Gly Pro Asp Gly Thr Pro
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 Tyr Val Thr Val Leu Lys Thr Ala Gly Ala Asn Thr Thr Asp Lys Glu
 305 310 315 320
 Leu Glu Val Leu Ser Leu His Asn Val Thr Phe Glu Asp Ala Gly Glu
 325 330 335
 Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Phe Ser His His Ser Ala
 340 345 350
 Trp Leu Val Val Leu Pro Ala Glu Glu Glu Leu Val Glu Ala Asp Glu
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Leu Phe Ile Leu Val Val Ala Ala Val Thr Leu Cys Arg Leu Arg Ser
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Pro Pro Lys Lys Gly Leu Gly Ser Pro Thr Val His Lys Ile Ser Arg
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Tyr Ser Phe Asp Thr Cys Lys Pro Pro Glu Glu Gln Leu Thr Phe Lys
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Asp Val His Asn Leu Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu
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Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr
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His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe
675 680 685

Thr Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe
690 695 700

Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr
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His Asp Leu Tyr Met Ile Met Arg Glu Cys Trp His Ala Ala Pro Ser
725 730 735

Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Val Leu
740 745 750

Thr Val Thr Ser Thr Asp Glu Tyr Leu Asp Leu Ser Ala Pro Phe Glu
755 760 765

Gln Tyr Ser Pro Gly Gly Gln Asp Thr Pro Ser Ser Ser Ser Gly
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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
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Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
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Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
85 90 95

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
100 105 110

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
115 120 125

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Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
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Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu

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175

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
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Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
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Tyr

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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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<300>
<301> Knappik et al
<302> Fully synthetic human combinatorial antibody libraries (HuCAL)
based on modular consensus frameworks and CDRs randomized with
trinucleotides.
<303> J Mol Biol
<304> 296
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<307> 2000-02-11
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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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81408-4400 sequence listing.txt

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gtaggtatct	cagttcggtg	taggtcggtc	gctccaagct	gggctgtgtg	cacgaacccc	2820
ccgttcagtc	cgaccgctgc	gccttatccg	gtaactatcg	tcttgagtcc	aaccggtaaa	2880
gacacgactt	atcgccactg	gcagcagcca	ctggtaacag	gattagcaga	gcgaggatag	2940
taggcggtgc	tacagagttc	ttgaagtgg	ggcctaacta	cggctacact	agaagaacag	3000
tatttggtat	ctgcgctctg	ctgtagccag	ttaccttcgg	aaaaagagtt	ggtagctctt	3060
gatccggcaa	acaaaccacc	gctggtagcg	gtgggttttt	tgtttgcaag	cagcagatta	3120
cgcgcagaaa	aaaaggatct	caagaagatc	ctttgatctt	ttctacgggg	tctgacgctc	3180
agtggaacga	aaactcacgt	taagggattt	tggtcagatc	tagcaccagg	cgtttaaggg	3240
caccaataac	tgccttaaaa	aaattacgcc	ccgccctgcc	actcatcgca	gtactgttgt	3300
aattcattaa	gcattctgcc	gacatggaag	ccatcacaaa	cggcatgatg	aacctgaatc	3360
gccagcggca	tcagcacctt	gtcgccctgc	gtataatatt	tgcccatagt	gaaaacgggg	3420
gcgaagaagt	tgtccatatt	ggctacgttt	aatcaaaaac	tggtgaaact	caccagggga	3480
ttggctgaga	cgaaaaacat	attctcaata	aaccctttag	ggaaataggc	caggttttca	3540
ccgtaacacg	ccacatcttg	cgaatatatg	tgtagaaact	gccggaaatc	gtcgtggtat	3600
tcactccaga	gcgatgaaaa	cgtttcagtt	tgctcatgga	aaacgggtgta	acaagggtga	3660
acactatccc	atatcaccag	ctcaccgtct	ttcattgccca	tacggaactc	cgggtgagca	3720
ttcatcaggc	gggcaagaat	gtgaataaag	gccggataaa	acttgtgctt	atttttcttt	3780
acgggtcttta	aaaaggccgt	aatatccagc	tgaacgggtct	ggttataggt	acattgagca	3840

81408-4400 sequence listing.txt

```
actgactgaa atgcctcaaa atgttcttta cgatgccatt gggatatatc aacggtggta 3900
tatccagtga tttttttctc catttttagct tccttagctc ctgaaaatct cgataactca 3960
aaaaatacgc ccggtagtga tcttatttca ttatggtgaa agttggaacc tcacccgacg 4020
tctaattgtga gtttagctcac tcattaggca ccccgagctt tacactttat gcttccggct 4080
cgtatgttgt gtggaattgt gagcggataa caatttcaca caggaaacag ctatgaccat 4140
gattacgaat t 4151
```

<210> 54
 <211> 306
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<220>
 <221> misc_feature
 <222> (253)..(255)
 <223> NNN=ACT OR GTT

```
<400> 54
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat tttaccctga ccattagcag cctgcaacct 240
gaagactttg cgnnntatta ttgccagacc tttggccagg gtacgaaagt tgaaattaaa 300
cgtagc 306
```

<210> 55
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

```
<400> 55
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat tttaccctga ccattagcag cctgcaacct 240
gaagactttg cggtttatta ttgctttcag tatggttcta ttcctcctac ctttggccag 300
ggtagcaaag ttgaaattaa acgtacg 327
```

81408-4400 sequence listing.txt

<210> 56
 <211> 309
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<220>
 <221> misc_feature
 <222> (256)..(258)
 <223> NNN=ACT OR GTT

<400> 56
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcca acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
 ccaggtcaag caccgcgtct attaatattat ggcgcgagca gccgtgcaac tgggggtccc 180
 gcgcgtttta gcggctcttg atccggcacg gattttaccc tgaccattag cagcctggaa 240
 cctgaagact ttgcgnnta ttattgccag acctttggcc aggggtacgaa agttgaaatt 300
 aaacgtacg 309

<210> 57
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 57
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcca acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
 ccaggtcaag caccgcgtct attaatattat ggcgcgagca gccgtgcaac tgggggtccc 180
 gcgcgtttta gcggctcttg atccggcacg gattttaccc tgaccattag cagcctggaa 240
 cctgaagact ttgcgactta ttattgccag cagatgtcta attatcctga tacctttggc 300
 cagggtacga aagttgaaat taaacgtacg 330

<210> 58
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 58
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcca acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120

81408-4400 sequence listing.txt

ccagggtcaag caccgcgtct attaatTTat ggCGcgagca gccgtgcaac tgggggtcccG	180
gcgcgTttta gcggctctgg atccggcacg gatTTttaccc tgaccattag cagcctggaa	240
cctgaagact ttgcgactta ttattgccag cagactaata atgctcctgt tacctttggc	300
caggggtacga aagttgaaat taaacgtacg	330

<210> 59
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 59	
gatatcgtga tgaccagag cccggatagc ctggcggtga gcctgggCGa acgtgcgacc	60
attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg	120
tggtaccagc agaaaccagg tcagccgCCg aaactattaa tttattgggc atccaccCGt	180
gaaagcgggg tcccggatcg ttttagcggc tctggatccg gcactgattt taccctgacc	240
atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagacctt tggccagggt	300
acgaaagttg aaattaaacg tacg	324

<210> 60
 <211> 345
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 60	
gatatcgtga tgaccagag cccggatagc ctggcggtga gcctgggCGa acgtgcgacc	60
attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg	120
tggtaccagc agaaaccagg tcagccgCCg aaactattaa tttattgggc atccaccCGt	180
gaaagcgggg tcccggatcg ttttagcggc tctggatccg gcactgattt taccctgacc	240
atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagcagta tgattctatt	300
ccttatacct ttggccaggg tacgaaagtt gaaattaaac gtacg	345

<210> 61
 <211> 315
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 61	
gatatcgCac tgaccagcc agcttcagtG agcggctCac caggtcagag cattaccatC	60

81408-4400 sequence listing.txt

```
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc caggacgtgt ttggcggcgg cacgaagtta 300
accgttcttg gccag 315
```

```
<210> 62
<211> 336
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VL domain
```

```
<400> 62
gatatcgcac tgaccagcc agcttcagt agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagagctatg acatgtataa ttatattgtg 300
tttggcggcg gcacgaagtt aaccgttctt ggccag 336
```

```
<210> 63
<211> 330
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VL domain
```

```
<400> 63
gatatcgcac tgaccagcc agcttcagt agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagtctcatc atttttatga ggtgtttggc 300
ggcggcacga agttaaccgt tcttggccag 330
```

```
<210> 64
<211> 336
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VL domain
```

81408-4400 sequence listing.txt

<400> 64
gatatcgac tgacccagcc agcttcagtg agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catcccggga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagagctatg acaataattc tgatgttgtg 300
tttggcggcg gcacgaagtt aaccgttctt ggccag 336

<210> 65
<211> 306
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 65
gatatcgaac tgacccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaaccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccaggacgtg tttggcggcg gcacgaagtt aaccgttctt 300
ggccag 306

<210> 66
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 66
gatatcgaac tgacccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaaccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccagagctat gactatttta agcttgtgtt tggcggcggc 300
acgaagttaa ccgttcttgg ccag 324

<210> 67
<211> 327
<212> DNA
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polynucleotide sequence of a VL domain

<400> 67

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactattctg ctgattatgt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 68

<211> 324

<212> DNA

<213> Artificial sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 68

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactttgatt ttgctgtgtt tggcggcggc	300
acgaagttaa ccgttcttgg ccag	324

<210> 69

<211> 327

<212> DNA

<213> Artificial sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 69

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gacggctctg atctttgggt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 70

81408-4400 sequence listing.txt

<211> 332
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<220>
<221> misc_feature
<222> (1)..(3)
<223> NNN=GAA OR CAG

<400> 70
nnngtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg 300
ggccaaggca ccctggtgac ggtagctca gc 332

<210> 71
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 71
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgataat 300
tggtttaagc ctttttctga tggttggggc caaggcacc tggtgacggt tagctca 357

<210> 72
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 72
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180

81408-4400 sequence listing.txt

gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgttaat	300
cattggactt atacttttga ttattggggc caaggcaccc tggtgacggt tagctca	357

<210> 73
 <211> 372
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 73	
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagt	60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc	120
cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac	180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgggtgt	300
ggttgggttt ctcatggtta ttattatctt tttgatcttt ggggccaagg caccctggtg	360
acggttagct ca	372

<210> 74
 <211> 332
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 74	
nnngtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagt	60
agctgcaaag cctccggata tacctttacc agctattata tgcaactgggt ccgccaagcc	120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcg cacgaactac	180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg	300
ggccaaggca ccctggtgac ggtagctca gc	332

<210> 75
 <211> 378
 <212> DNA

81408-4400 sequence listing.txt

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 75

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccgga atagcggcgg cacgaactac      180
gcgcagaagt ttcaggggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtaatatg      300
gcttatacta attatcagta tgtaatatg cctcattttg attattgggg ccaaggcacc      360
ctggtgacgg ttagctca                                     378
```

<210> 76

<211> 378

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 76

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccgga atagcggcgg cacgaactac      180
gcgcagaagt ttcaggggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttctatg      300
aatttacta tgtattggt tcttcgtcgt gttctttttg atcattgggg ccaaggcacc      360
ctggtgacgg ttagctca                                     378
```

<210> 77

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 77

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccgga atagcggcgg cacgaactac      180
gcgcagaagt ttcaggggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgatttt      300
```

81408-4400 sequence listing.txt

cttggttatg agtttgatta ttggggccaa ggcaccctgg tgacggttag ctca 354

<210> 78
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 78
 caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60
 agctgcaaag cctccggata tacctttacc agctattata tgactgggt ccgccaagcc 120
 cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcg cacgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttattat 300
 ggttcttctc ttatcatta tgttttgggt ggttttattg attattgggg ccaaggcacc 360
 ctggtgacgg ttagctca 378

<210> 79
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 79
 caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60
 agctgcaaag cctccggata tacctttacc agctattata tgactgggt ccgccaagcc 120
 cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcg cacgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtggttat 300
 tggatgctt attttactta tattaattat ggttattttg ataattgggg ccaaggcacc 360
 ctggtgacgg ttagctca 378

<210> 80
 <211> 381
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 80
 caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60

81408-4400 sequence listing.txt

```

agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagtg gatgggctgg attaaccgga atagcggcgg cacgaactac      180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtacttgg      300
cagtattcctt atttttatta tcttgatggg gggtattatt ttgatatttg gggccaaggg      360
accctggtga cggttagctc a                                              381

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<210> 81
<211> 335
<212> DNA
<213> Artificial Sequence

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```

<220>
<223> polynucleotide sequence of a VH domain

```

```

<220>
<221> misc_feature
<222> (1)..(3)
<223> NNN=GAA OR CAG

```

```

<400> 81
nnngtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg      60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc      120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat      180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg      240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgtgat      300
tgggggccaag gcaccctggt gacgggtagc tcagc                                335

```

```

<210> 82
<211> 390
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> polynucleotide sequence of a VH domain

```

```

<400> 82
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg      60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc      120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat      180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg      240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgttat      300
cattcttggg atgagatggg ttattatggg tctactgttg gttatatgtt tgattattgg      360
ggccaaggca ccctggtgac gggttagctca                                390

```

81408-4400 sequence listing.txt

<210> 83
 <211> 341
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 83
 nnngtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cgggtgagcgt gaaaagccgg attaccatca acccggatac ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgtgattggg gccaaaggcac cctggtgacg gttagctcag c 341

<210> 84
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 84
 caggtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cgggtgagcgt gaaaagccgg attaccatca acccggatac ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgttcttatt atcctgattt tgattattgg ggccaaggca ccctggtgac ggtagctca 360

<210> 85
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 85

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln

81408-4400 sequence listing.txt

```

1              5              10              15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
      20              25              30
Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
      35              40              45
Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
      50              55              60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
      65              70              75              80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Ser Ala Asp Tyr
      85              90              95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100              105

```

```

<210> 86
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VL domain

<400> 86

```

```

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1              5              10              15
Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
      20              25              30
Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
      35              40              45
Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
      50              55              60
Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
      65              70              75              80
Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser His His Phe Tyr
      85              90              95
Glu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100              105              110

```

81408-4400 sequence listing.txt

<210> 87
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 87

```

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1      5      10     15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
      20     25     30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
      35     40     45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
      50     55     60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65      70      75     80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Phe Asp Phe Ala Val
      85     90     95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100    105
  
```

<210> 88
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 88

```

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1      5      10     15

Glu Arg Ala Thr Ile Asn Cys Arg Ser Ser Gln Ser Val Leu Tyr Ser
      20     25     30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
      35     40     45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
      50     55     60
  
```

81408-4400 sequence listing.txt

50

55

60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Asp Ser Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110

Lys Arg Thr
115

<210> 89

<211> 110

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 89

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Met Ser Asn Tyr Pro
85 90 95

Asp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
100 105 110

<210> 90

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

81408-4400 sequence listing.txt

<223> polypeptide sequence of a VL domain

<400> 90

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Asn Asn
85 90 95

Ser Asp Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 91

<211> 109

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 91

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Phe Gln Tyr Gly Ser Ile Pro Pro
Page 41

85

90

95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105

<210> 92
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 92

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Asn Asn Ala Pro
 85 90 95

Val Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105 110

<210> 93
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 93

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
 20 25 30

81408-4400 sequence listing.txt

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Phe Lys Leu Val
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 94
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VL domain

<400> 94

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Met Tyr
85 90 95

Asn Tyr Ile Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 95
<211> 109
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VL domain

<400> 95

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Pro Asp Leu Trp
85 90 95

Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 96

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 96

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

81408-4400 sequence listing.txt

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Phe Leu Gly Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 97
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain
<400> 97

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Tyr Gly Ser Ser Leu Tyr His Tyr Val Phe Gly Gly Phe
100 105 110

Ile Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 98
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain
<400> 98

81408-4400 sequence listing.txt

Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala Leu Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Ser Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Tyr His Ser Trp Tyr Glu Met Gly Tyr Tyr Gly Ser Thr
100 105 110

Val Gly Tyr Met Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
115 120 125

Ser Ser
130

<210> 99
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 99

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Asn Trp Phe Lys Pro Phe Ser Asp Val Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 100

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 100

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Asn His Trp Thr Tyr Thr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 101

<211> 126

<212> PRT

<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Trp Tyr Ala Tyr Phe Thr Tyr Ile Asn Tyr Gly Tyr
100 105 110

Phe Asp Asn Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 102

<211> 124

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 102

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Gly Gly Trp Val Ser His Gly Tyr Tyr Tyr Leu Phe Asp
100 105 110

Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 103
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain
<400> 103

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Thr Trp Gln Tyr Ser Tyr Phe Tyr Tyr Leu Asp Gly Gly Tyr
100 105 110

Tyr Phe Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 104
<211> 126
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 104

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Met Ala Tyr Thr Asn Tyr Gln Tyr Val Asn Met Pro His
100 105 110

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 105

<211> 126

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 105

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Met Asn Ser Thr Met Tyr Trp Tyr Leu Arg Arg Val Leu
100 105 110

Phe Asp His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 106

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 106

Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Gly Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Ser Tyr Tyr Pro Asp Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120